

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/19675

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :H04L 7/00, 12/66, 12/28, 12/56; H04Q 7/20, 7/24; H04M 11/00,

US CL :Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 455/433, 448, 449, 456.5, 406, 408, 403, 414.1, 445, 552, 555, 411, 432.2, 414.2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched, WEST

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WLAN, PDP, UTMS,

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,E	US 2003/0119481 A1 (HAVERINEN et al.) 26 June 2003, ALL	1, 11
A,P	US 2002/0031160 A (GIBSON ANG et al.) 13 February 2003, ALL	12-18
A,P	US 2003/0014367 A1 (TUBINIS) 16 January 2003, ALL	1-18
A,P	US 2002/0168969 A1 (KOSKIENEN et al.) 14 November 2002, ALL	1-18
A,E	US 2003/0157937 A1 (OIKARINEN et al.) 21 August 2003, ALL	1-18
A,E	US2003/0171112 A1 (LUPPER et al.) 11 September 2003, ALL	1-18

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier document published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"A"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 05 NOVEMBER 2003	Date of mailing of the international search report 03 DEC 2003
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3930	Authorized officer NAGHMEH MEHRPOUR Telephone No. (703) 305-7155

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370/338, 328, 401